Hua Hong Semiconductor (1347.HK)

Leading manufacturer of semiconductors on 8-inch wafers

Hong Kong | TMT| Company report

10 Jul 2015

Hua Hong Semiconductor Limited is a pure-play wafer foundry. Based on the revenue in 2014, it ranked the ninth largest semiconductor foundry worldwide, with a market share of 1.4%. Meanwhile, the Company ranked the second among semiconductor foundries in China, right after Semiconductor Manufacturing International Corporation which has a market share of 4.2%. It is worth to note that the Company specializes on manufacturing of semiconductors on 8-inches wafers for specialty applications and it ranks the second among the manufacturers of such wafers worldwide.

Currently, the global production capacity of 8-inch wafers is relatively tight. According to the information provided by Gartner, the annual growth of global production capacity of 8-inch wafer foundries merely increased 2.5% annually from 2008 to 2014. In 2015, even though companies including United Microelectronics Corporation, Semiconductor Manufacturing International Corporation, Vanguard International Semiconductor Corporation and Hua Hong announced to expand the production capacity of 8-inch wafers, the increased capacity can only account for 3% of the 2015 annual global capacity based on statistics. Overall speaking, the market demand and supply of 8-inch wafers has demonstrated significant improvement. We think the demand and supply situation in the industry would still be tight, while the Company`s profitability could keep on a high level.

In the context of economic restructuring, China has pinpointed “localization of the production of wafers” and “Made in China 2025” as the long term development strategies. Internet of things (IoT), wearable devices and automotive electronics etc will bring long term stable demand to Chinese suppliers. Hua Hong`s major market is in Mainland China with revenue contribution over 50% (2015Q1 recorded 56.5%). We believe the Company would be benefitted from the boost of demand for semiconductors in China market. Moreover, Hua Hong still enjoys the support from preferential policies, huge amount of grants and subsidies would still be one of the main profit sources.

Positive prospect on profit

Even though Hua Hong specializes on the production of 8-inch wafers which are comparatively backward, the Company enjoys a leading position in this field. Moreover, the segment of 8-inch wafer production brings solid and steady growth to the Company. Market demand is improving, particularly the Chinese domestic market. Localization of the production of wafers also supports the release of demand. We expect the Company would still maintain high level of utility rate on capacity, as well as profitability. We give the Company a valuation level corresponding to 1x of book value per share in 2015. Target price is set as HK$11.58, with the “Buy” rating initially. (Closing price as at 8 July 2015)

Valuation Comparison

Name	Ticker	Current Mkt. Cap	Est P/E Current Yr	Price/ Earnings	Price/ Book
HUA HONG SEMICONDUCTOR LTD	**1347 HK Equity**	**1.02b**	**9.99**	**8.99**	**0.7**
SEMICONDUCTOR MANUFACTURING	981 HK Equity	3.42b	16.77	23.27	1
UNITED MICROELECTRONICS CORP	2303 TT Equity	5.09b	10.45	10.38	0.69
TAIWAN SEMICONDUCTOR MANUFAC	2330 TT Equity	115.22b	11.59	12.13	3.18
VANGUARD INTERNATIONAL SEMI	5347 TT Equity	2.21b	13.07	12.53	2.37
Average			**12.37**	**13.46**	**1.59**

Source: Bloomberg, Phillip Securities (HK) Research

Buy (Initially)

CMP: HKD 7.67
(Closing price as at 8 July 2015)
TARGET: HKD 11.58 (+51%)

COMPANY DATA

O/S SHARES (MN) :	1,034
MARKET CAP (HKDMN) :	7,931
52 - WK HI/LO (HKD):	12.7/ 6.86

SHARE HOLDING PATTERN , %

Shanghai Hua Hong International :	33.89
Sino-Alliance International :	26.49

PRICE PERFORMANCE , %

	1M	3M	1Y
Hua Hong	-30.09	-30.15	—
HSI	-16.99	-19.78	—

PRICE VS. HSI

Source: Phillip Securities (HK) Research

KEY FINANCIALS

US$ mn	FY13	FY14	FY15E	FY16E
Net Sales	585	665	728	834
Net Profit	62	93	112	131
EPS, US$	0.08	0.11	0.11	0.13
PER, x	12.37	9.00	9.10	7.84
BVPS, US$	1.31	1.42	1.49	1.58
P/BV, x	0.75	0.70	0.66	0.63
ROE, %	6.1	7.4	7.5	8.2
Debt/Equity (%)	55.99	35.80	42.86	42.86

Source: Company reports, Phillip Securities Est.

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Leading manufacturer of semiconductors on 8-inch wafers

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Foundry 2014 market share ranking

2014 Rank	Company	Revenue in 2014(US$: mn)	2014 Market Share(%)
1	TSMC	25,175	53.7%
2	UMC	4,621	9.9%
3	Globalfoundries	4,400	9.4%
4	Samsung	2,412	5.1%
5	SMIC	1,970	4.2%
6	Powerchip	917	2.0%
7	TowerJazz	828	1.8%
8	Vanguard International	790	1.7%
9	**Hua Hong Semiconducto**	**665**	**1.4%**
10	Fujitsu Semiconductor	653	1.4%
	Top 10 for 2014	36,297	90.6%

Source: Gartner, Phillip Securities (HK) Research

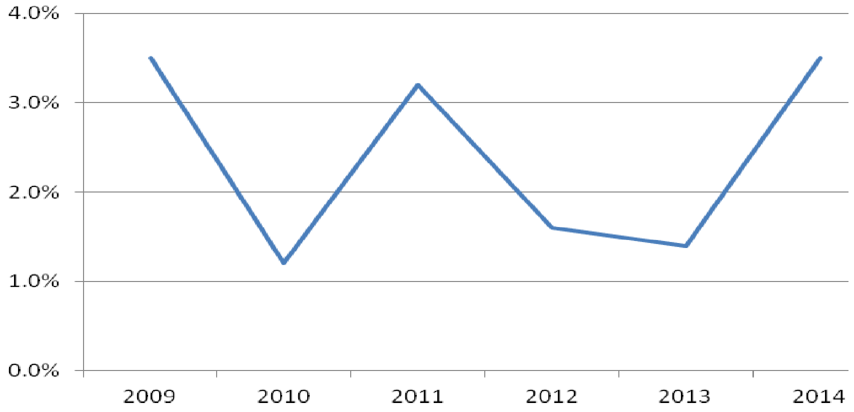
The Company is the leading manufacturer of embedded nonvolatile memory device and also the only wafer foundry which applies ESF2 SuperFlash process technology onto commercial production. Such memory device can bear a wider range of temperature and have advantages of high level of persistence and data retention ability.

Moreover, the Company has leading position in SIM card segment, with a market share exceeding 50%. Smart cards are adopted on identity cards, health insurance cards, as well as credit cards and debit cards issued by banks. The Company is the largest foundry of Chinese identity cards, and it is expected to be the major foundry of the next generation of social security cards. Currently, among the six authorized providers of smart cards in China, five companies provide outsourcing to Hua Hong, including Tongfang Microelectronics, Fudan Microelectronics, CEC Huada Electronic, Nationz Technologies and Hua Hong IC.

Situation of market demand and supply improved, profitability keeps robust

Currently, the global production capacity of 8-inch wafers is relatively tight. According to the information provided by Gartner, the annual growth of global production capacity of 8-inch wafer foundries merely increased 2.5% annually from 2008 to 2014. Among such capacity worldwide, Taiwan and Mainland China accounted for 47% and 18% respectively. In 2015, even though companies including United Microelectronics Corporation, Semiconductor Manufacturing International Corporation, Vanguard International Semiconductor Corporation and Hua Hong announced to expand the production capacity of 8-inch wafers, the increased capacity can only account for 3% of the 2015 annual global capacity based on statistics.

Global production capacity of 8-inch wafers keeps low growth

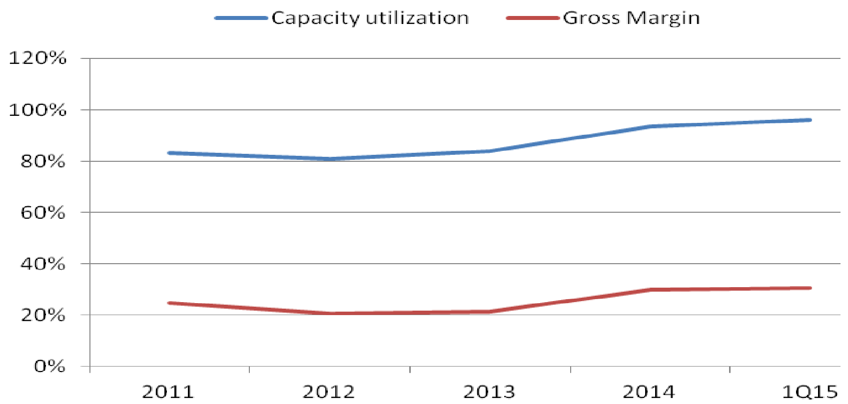


Source: Phillip Securities (HK) Research

From the demand side, the market sale of 8-inch wafer foundries improved in the past few years. It is mainly benefitted from the IC demand from smart phones/4K2K and the upgrading of wafers from the 6 inches to 8 inches installed in analog/power management IC etc. In addition, the number of applications which do not need advanced 12-inch process has increased, mainly cover MCU and smart cards (can be manufactured by existing technology).

Therefore, the market demand and supply of 8-inch wafers has demonstrated significant improvement. The utility rate of capacity of Hua Hong was also raised significantly to 93.5% in 2014 and 96.1% in 2015Q1 from the previous figures of about 80%. It in turn boosted the profitability of the Company. For example, the gross profit margin increased to higher than 30% from the previous figures of about 20%. We think the demand and supply situation in the industry would still be tight, while the Company`s profitability could keep on a high level.

Global production capacity of 8-inch wafers keeps low growth



Source: Company reports, Phillip Securities (HK) Research

Continual launch of supportive policies

In 2014, the overall self-sufficiency rate of the semiconductor manufacturing industry in China only amounted to 37%, which is far too low to satisfy the overall domestic demand in China, and it brought a vast need of importing substitutes. Especially in the context of economic restructuring, China has pinpointed “localization of the production of wafers” and “Made in China 2025” as the long term development strategies. Internet of things (IoT), wearable devices and automotive electronics etc will bring long term stable demand to Chinese suppliers. Hua Hong`s major market is in Mainland China with revenue contribution over 50% (2015Q1 recorded 56.5%). We believe the Company would be benefitted from the boost of demand for semiconductors in China market.

Moreover, Hua Hong still enjoys the support from preferential policies. The Company has received a sum of grants and subsidies of more than USD0.11 billion in past few years, accounted for about 45%

of the pretax profit. We consider the semiconductor manufacturing industry as a capital and technological intensive industry and it needs support from government policies in particular. With the strong support from the central and regional authorities on developmental strategies of semiconductor industry and the great effort spent on building up the IC industrial investment fund, huge amount of grants and subsidies would still be one of the main profit sources of the Company.

Catalyst

Consistent preferential policies;
Higher-than-expected demand on imported substitutes.

Risk Factor

Lower utility rate of capacity;
Unsatisfactory progress on new technological innovation.

Financials

Periodicity:	2012	2013	2014	2015F	2016F
Valuation Ratios					
Price Earnings	14.14	12.37	9.00	9.10	7.84
Price to Book	0.83	0.75	0.70	0.66	0.63
Dividend Yield	-	-	-	3.30%	3.83%
Per share data(US$)					
EPS Adjusted	0.070	0.080	0.110	0.109	0.126
Book Value Per Share	1.197	1.312	1.417	1.494	1.582
Dividends Per Share	-	-	-	0.033	0.038
Growth &Margin					
Revenue growth	-6.4%	2.3%	13.7%	9.6%	14.5%
Operating profit growth	-30.1%	-11.3%	113.6%	17.3%	17.2%
Net profit growth	-37.5%	3.6%	50.5%	20.8%	16.0%
Gross Margin	20.6%	21.5%	29.8%	30.6%	31.0%
Operating Margin	10.2%	8.8%	16.6%	17.7%	18.2%
Net Profit Margin	10.4%	10.6%	14.0%	15.4%	15.7%
Key ratios					
Return on Assets	3.6%	3.8%	5.1%	5.4%	5.7%
Return on Equity	6.4%	6.1%	7.4%	7.5%	8.2%
Liability ratio	40.06%	35.89%	26.36%	30.00%	30.00%
Effective Tax Rate	11.8%	12.7%	22.9%	22.5%	22.5%
Income Statement(US$: mn)					
Revenue	571	585	665	728	834
- Cost of Goods Sold	454	459	467	505	575
Gross Income	118	125	198	223	258
- Selling, General & Admin Expen	64	77	93	100	115
Operating Income	58	52	110	129	151
Pretax Income	68	71	121	145	168
- Income Tax Expense	8	9	28	33	38
Net Income Adjusted*	60	62	93	112	131

Source: Company reports, Phillip Securities (HK) Research Estimates

(Financial figures as at 8 July 2015)

PHILLIP RESEARCH STOCK SELECTION SYSTEMS

Total Return	Recommendation	Rating	Remarks
>+20%	Buy	1	>20% upside from the current price
+5% to +20%	Accumulate	2	+5% to +20%upside from the current price
-5% to +5%	Neutral	3	Trade within ± 5% from the current price
-5% to -20%	Reduce	4	-5% to -20% downside from the current price
<-20%	Sell	5	>20%downside from the current price

We do not base our recommendations entirely on the above quantitative return bands. We consider qualitative factors like (but not limited to) a stock`s risk reward profile, market sentiment, recent rate of share price appreciation, presence or absence of stock price catalysts, and speculative undertones surrounding the stock, before making our final recommendation

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